

AI and Student Entrepreneurship: Perceptions, Practices, and Challenges in the Path to Sustainable Innovation

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Introduction

The intersection of artificial intelligence (AI) and entrepreneurship among young people has become increasingly relevant in the context of digital transformation and innovation-driven education. Recent research indicates a strong influence of digital and coding skills on students' propensity to create new businesses, highlighting the importance of equipping them with practical AI-based capabilities (Sansone, 2024).

This paper investigates the perceptions, current practices and challenges faced by students when attempting to use AI tools in entrepreneurial projects.

The study explores how students understand and integrate AI into their business development. Using a mixed-methods approach—combining survey data from students enrolled in entrepreneurship Programmes and interviews with student entrepreneurs—this research aims to uncover diverse useful applications, from automating routine tasks to generative use cases such as content creation and business planning. These findings echo other recent studies showing that AI can significantly enhance entrepreneurial skills, including opportunity identification, creative thinking, and sustainable innovation (Vecchiarini-Piazza, 2023).

The paper also addresses the role that higher education institutions play in supporting AI-driven entrepreneurship through curriculum updates, mentoring Programmes, and access to digital tools. It provides concrete examples and proposes useful ideas to improve entrepreneurship education in the context of new AI-driven technologies.

Also, studies such as Almahry and Sarea (F. Almahry, 2018) highlight the importance of early entrepreneurial training, and Hadi & Abdullah (Hadi, 2018) emphasize the role of personal traits in business success. Building on these perspectives, Luo et al. (Luo, et al., 2022) show that a supportive entrepreneurial environment, combined with targeted education, can significantly enhance students' belief in their capacity to launch and manage a business. This underscores the need to integrate AI-related training into broader strategies for competence development in order to empower the next generation of entrepreneurs.

Objectives

The main objective of this study is to examine how artificial intelligence (AI) tools are perceived and used by students involved in entrepreneurial activities. Specifically, the paper aims to explore the extent to which AI contributes to the development of entrepreneurial projects by students, both as a technical resource and for creativity and innovation.

The second objective is to assess students' awareness of the potential of AI in supporting sustainable and socially responsible entrepreneurship – particularly in areas such as renewable energy, waste reduction and circular economy models.

Furthermore, this paper aims to generate concrete information that can form the basis for curriculum development in higher education.

Methodology

This study uses a mixed-methods approach to gather information about how students interact with artificial intelligence in their entrepreneurial projects. Quantitative data was collected through an online survey distributed to students enrolled in entrepreneurship and business Programmes. The survey included questions about their knowledge, use, and perceptions of AI tools in developing business ideas.

To complement the survey, qualitative data was collected through semi-structured interviews with student entrepreneurs who have actively integrated AI into their startups.

Combining quantitative and qualitative methods allows for a deeper understanding of both general trends and individual perspectives.

This methodology ensures a balanced and detailed exploration of the impact of artificial intelligence on student entrepreneurship.

Results and Discussions

The results presented here are based on preliminary observations and expectations informed by the literature and initial feedback from participating students. This study anticipates that a large proportion of students involved in entrepreneurship programmes will recognize the usefulness of AI tools, mainly for automating routine tasks and supporting business planning. We expect students to demonstrate varying levels of familiarity and confidence with AI, with more advanced applications such as machine learning and predictive analytics being used less frequently due to skills gaps.

We also hypothesize that students involved in sustainability-focused projects – such as renewable energy management and recycling – will see AI as a key enabler for innovation and environmental impact. The study anticipates that it will indicate the need for universities to adapt their curricula and support offerings to develop students' skills in artificial intelligence and sustainable entrepreneurship. These results will provide concrete conclusions and recommendations for fostering student innovation.

Conclusion and Policy Recommendations

This study shows that artificial intelligence (AI) has a strong potential to support student entrepreneurship by fostering innovation, improving efficiency, and enabling the development of scalable solutions. However, while students show interest in using AI, their engagement is often limited to basic applications, mainly due to a lack of specialized training, limited technical resources, and a lack of interdisciplinarity.

To fully harness the value of AI in student entrepreneurial projects, higher education institutions should review academic curricula to include practical AI tools and ethical considerations relevant to innovation and business

development. Equally important is improving students' access to the necessary digital infrastructure, such as cloud platforms and machine learning frameworks that would allow them to prototype and test their ideas efficiently.

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